

1 **ABSTRACT OF THE DISCLOSURE**

2 Apparatus and methods for fitting mechanical parts to minimize prevent free play are
3 described. Additionally, a design for an apparatus having a piston, which restrains the piston before
4 actuation and which allows the piston to gain momentum before striking an object, is detailed. The
5 described apparatus are applicable to devices involving shearable elements. An embodiment of the
6 invention as a pyrotechnically activated valve incorporating such features to minimize free play in
conjunction with such features to restrain the piston and also allow the piston to gain momentum is
described.